



## Wall-, Ceiling-, Roof duct LUX-NOVA

Building authority approval for Germany Z-7.4-3487  
VKF-Fire protection application for Switzerland Nr. 26047  
Fire safety assessment for Austria Nr. 315012204-1





## Wall-, Ceiling-, Roof duct LUX-NOVA

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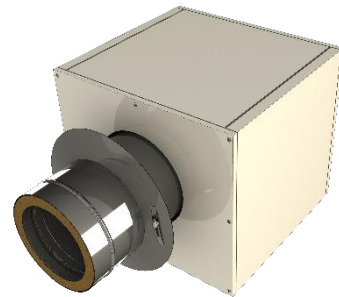
## 1 MOUNTING AND REGULATIONS

The installing has to be performed professionally according to the abovementioned approval, installing instructions respectively according to the valid national regulations. In Germany in particular DIN V 18160-1, as well as the applicable regional building rules (LBauO), fire regulations (FeuVO), relevant DIN standards and all other building- and safety regulations. The required cross section has to be determined according to DIN EN 13384 and has to be checked by the executing specialist firm. Before the installation, the design of the system has to be clarified with the concerned district chimney sweeper.

## 2 NEEDED TOOLS

(for on-site wall cutting)

- Electronic cable and pipe finder
- Drilling machine and extension cable
- Jigsaw
- Chainsaw
- Handsaw
- Spirit level
- Retractable tape measure and pencil to mark
- Stanley knife
- Tool kit
- Cordless screwdriver
- Filler tools
- etc. ...



## 3 GENERAL SAFETY INSTRUCTIONS



- While working at high altitudes and in the roof area, it is important to set up securing and holding systems. The general safety regulations for occupational safety apply here!
- All tools and components must be secured against falling during installation and also appropriate retention and catching devices should be installed.
- When using fixed or mobile scaffolding and work platforms, the relevant safety regulations must be strictly adhered to.
- Before starting to drill into walls or ceilings, check the installation location for power cables, water and gas pipes using appropriate measuring tools.
- If necessary, inspect the building plans so that no load-bearing beams of the house structure are damaged.
- In general, all construction and safety regulations must be observed.

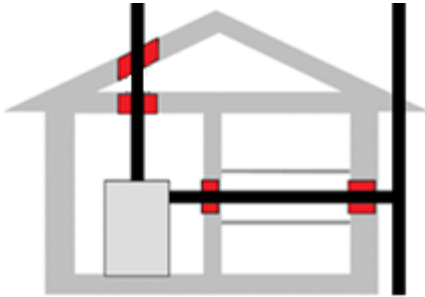


After a soot fire, the exhaust system and the wall-, ceiling-, roof duct must be checked by the authorized district chimney sweeper, so that a safe usability is given.



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## APPLICATION AREA



- The LUX-NOVA wall, ceiling, and roof duct is used when an exhaust gas system with high exhaust gas temperature (maximum 400°C) penetrates components made of combustible materials and the distances to combustible components should be reduced with regard to building regulations. This makes it possible that a required change of the framework in the wall can be avoided.
- During installation of exhaust flue systems, connectors and chimneys through the flammable walls, ceilings and roofs may be subject to heat accumulation, as the heat in the pass-through can't be dissipated (no air circulated and cooling) which can lead to smoldering fires in the wall structure. By the use of our approved wall, ceiling, roof duct LUX-NOVA the safe usability is assured!
- The wall, ceiling, roof duct is used for openings inside the house and from the inside of the house to the outside. (In the sketch above the locations of the wall, ceiling, roof duct LUX-NOVA is shown). The use of the components for the wall, ceiling or roof penetration does not exempt the fire protection requirements of the state regulations (e.g. arrangement in shafts) and does not constitute a fire-resistant finish.

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## CHARACTERISTICS AND COMPOSITION

The components are intended for the installation of single or double-walled exhaust systems up to a clear diameter of 300 mm through walls, ceilings and roofs made of combustible building materials, the supply can also be single-walled until penetration.

Exhaust systems (single wall and double wall) must have at least one insulating layer of 25 mm in the duct.

Only fireplaces that do not generate exhaust gases with temperatures higher than 400 ° C at nominal heat output may be connected to the flue gas systems. The length of the passage corresponds to the thickness of the wall, ceiling or roof to be penetrated by a maximum of 496 mm / minimum 72 mm. The wall, ceiling and roof structures to be penetrated may consist of a lumber frame (static bearing layers) and various combustible and non-combustible building materials (thermal barrier coatings). The information given in the building inspection approval Z-7.4-3487 must be followed.



Before placing the duct in the wall, ceiling or roof, check with the designer / architect whether there are load-bearing beams, electrical cables or other domestic installations in this area. For safety's sake, an electronic line locator should be used.



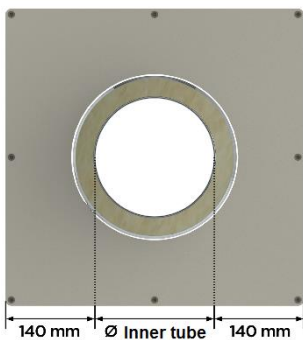
Please check before mounting if all following items (Mounting bracket, screws and cotton wool) are included in the delivery.



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**CREATE A WALL SECTION / MINIMUM DISTANCE**

Mark the center of the duct on the wall. Drill outwards with a long drill bit in the center and mark the outside dimension of the wall, ceiling and roof penetration with circumferential 5 mm installation gap inside and outside on the wall. Carefully detach the cutout with a jigsaw.



**NOTE Minimum distance:**

Please note that the minimum distance between the inner tube and the outer surface of the wall feel-through must always be min. 140 mm.

Name	DN Ø flue pipe in mm	Component length in mm Dimension A	External dimensions in mm Dimension B
LUX-NOVA600.1	till DN 150	600	430 x 430
LUX-NOVA1000.1	till DN 150	1000	430 x 430
LUX-NOVA600.2	DN 160 till DN 200	600	480 x 480
LUX-NOVA1000.2	DN 160 till DN 200	1000	480 x 480
LUX-NOVA600.3*	DN 225 till DN 250	600	530 x 530
LUX-NOVA1000.3*	DN 225 till DN 250	1000	530 x 530

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**VARIANTS LUX-NOVA**

**LUX-NOVA Variant 1:**

Variable shortenable **WITH** pipe cut and adapted to different wall thicknesses with predefined holes depending on the square cross-section of the wall, ceiling, roof ducts.

**LUX-NOVA Variant 2:**

Variable shortenable **WITHOUT** pipe cutting and adapted to different wall thicknesses without holes in the front panels of the wall, ceiling or roof ducts. Thus, flexibility on the construction site, as the pipe cut is created on site and the wall, ceiling, roof penetration for different nominal widths of the exhaust system can be used. It is also possible to use the hole cut apart from the middle, but only if the required distance of 140 mm is maintained as in point 6!



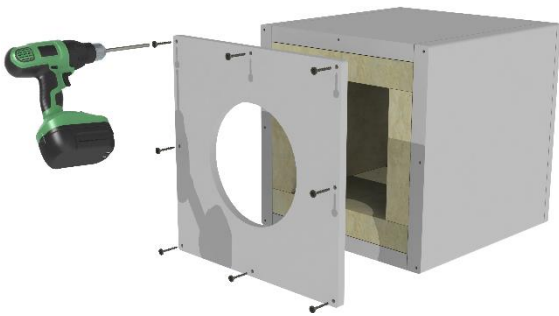
Applies for both variants:

The wall, ceiling, roof duct always has on one side a 10 mm thick plaster base (exterior of buildings) and a 12 mm front panel (inside of the building). The 12 mm front panel can also be ordered / designed 100 mm larger on request to allow connection to the internal vapour barrier of the building. You should always use suitable adhesive tapes for vapour barriers in order to be able to carry out repairs in the event of damage to the vapour barrier.

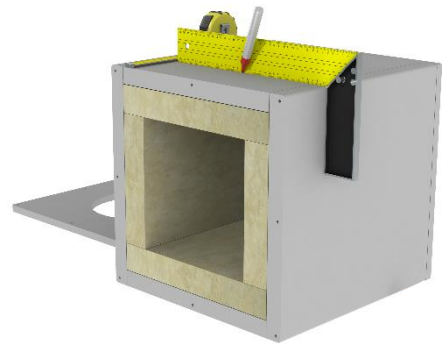
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## SHORTEN THE WALL DUCT LUX-NOVA Variant 1 AND Variant 2:

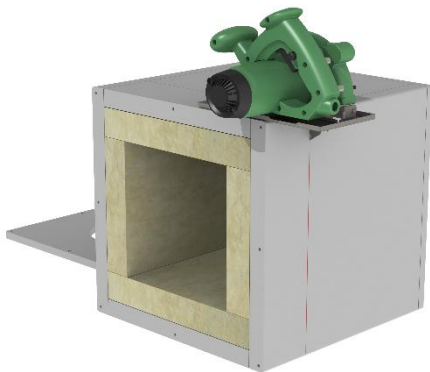
Transfer the required amount of wall thickness to the wall duct.  
**Note:** When drawing and shortening, please also consider the 12 mm wall thickness of the inner front panel, as this is removed before shortening and screwed on again after shortening. The rock wool plate behind the outer plaster base plate serves as insulation against condensation moisture and must remain installed always. Only the inside of the wall feedthrough may be shortened!



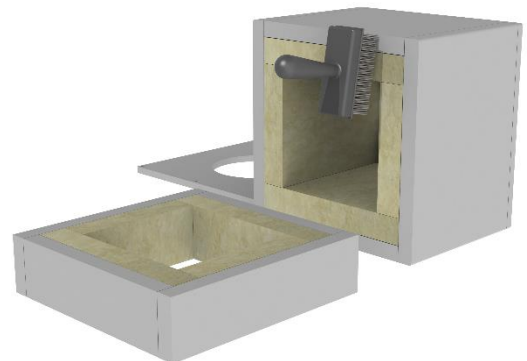
1. Unscrew and remove the front panel screws.



2. Mark the dimension e.g. with an angle meter on the wall duct.

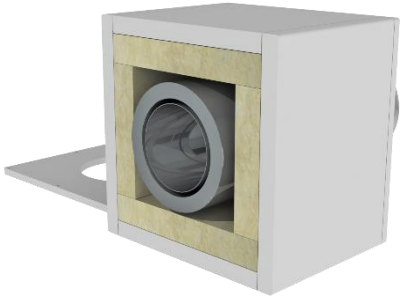


3. Cut through the wall duct to the required size. A clean and rectangular cut is e.g. possible with a circular saw.

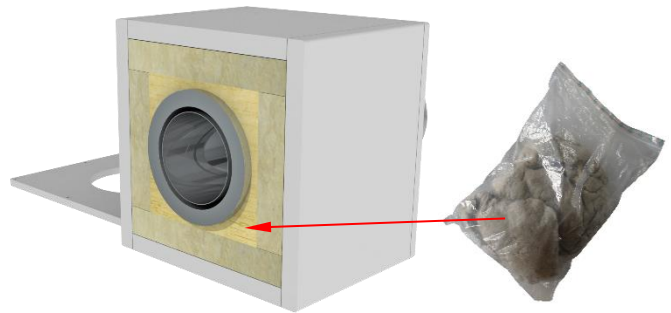


4. Check cutting edge for squareness. From cut section e.g. remove the dust with a hand brush / vacuum cleaner.

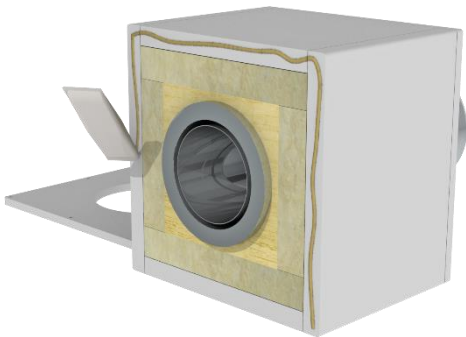




5. Insert double wall flue pipe and center it so that it is flush with the bolted front panel.



6. Completely fill the cavity between the flue pipe and the wall duct with the stuffing wool.



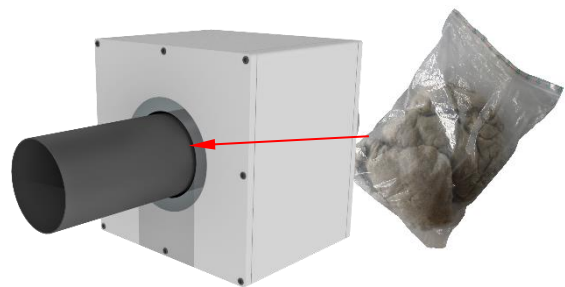
7. Apply the fire protection adhesive, circumferential and caterpillar-shaped.



8. Glue front panel and screw, double wall flue pipe is flush with the front panel.



9. Insert the wall duct from the inside to the outside into the wall, screw on the fixing brackets to the wall duct and insert the component into the wall.



10. Insert connecting pipe in the wall sleeve. If no wall sleeve is used, center the remaining annular gap between the exhaust system and the wall, ceiling, roof duct with the stuffing wool included in the scope of supply and stuff it tightly on both sides in the corner area!

Subsequent sealing between the tube and the wall, ceiling, roof duct can be achieved by means of high-temperature-resistant silicone on both sides. The plasterboard close to the open air must be protected against the ingress of rainwater. For example, with weather-resistant exterior plaster according to DIN EN 998-1, with a covering made of weatherproof and frost-resistant building materials. For wooden facades, a metal rosette or bezels are used. A metal rosette is also helpful for the discharge of rainwater on the outer wall.

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## LARGER CONNECTION PLATE & SPECIAL SEAL FOR MOUNTING / ATTACHING VAPOUR BARRIER

On-site vapour barriers can be glued directly to the pre-primed wall duct with suitable adhesive tapes.



Optionally, the wall duct can be ordered with a connection plate, which is 100 mm larger than the wall duct itself, which makes it easier to attach the wall duct to the wall and glue the existing vapor barrier directly to the connection plate. Another option is a special seal including adhesive, which facilitates the connection of the on-site vapour barrier. The sealing surface for the vapour barrier foil must also be provided with adhesive.

The larger connection plate does not serve as a radiation protection plate, but is only needed for the connection of the vapor barrier and for the attachment of the wall feedthrough on the wall.





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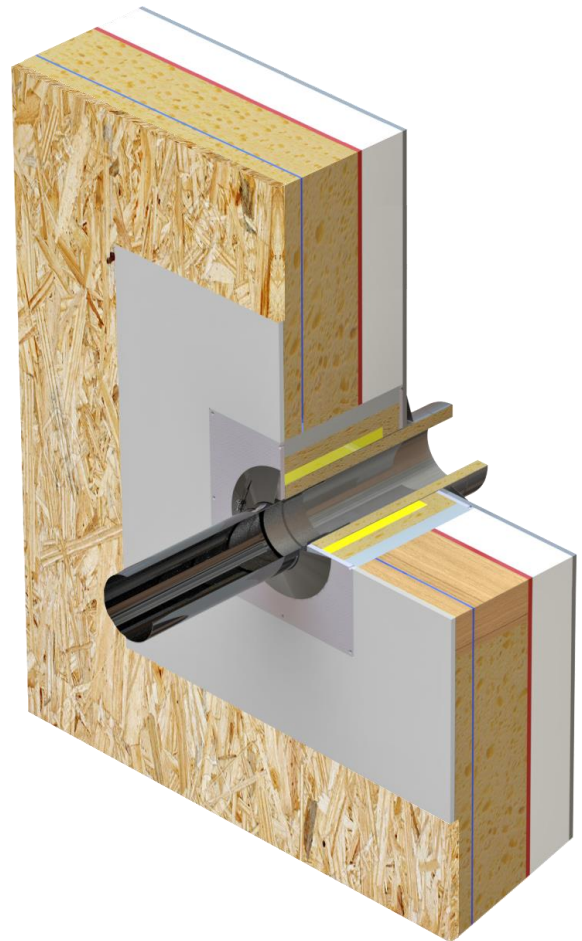
## WALLS WITH COMBUSTIBLE CLADDING - LARGE RADIATION PROTECTION PLATE

The one-piece radiation protection panel consists of non-combustible calcium silicate fire protection material according to building material class A1, with thickness 20 mm and dimension 1050 x 1050 mm. It is required if a single wall exhaust pipe is used and the wall covering within 40 cm around it consists of combustible building materials (e.g. wood paneling).

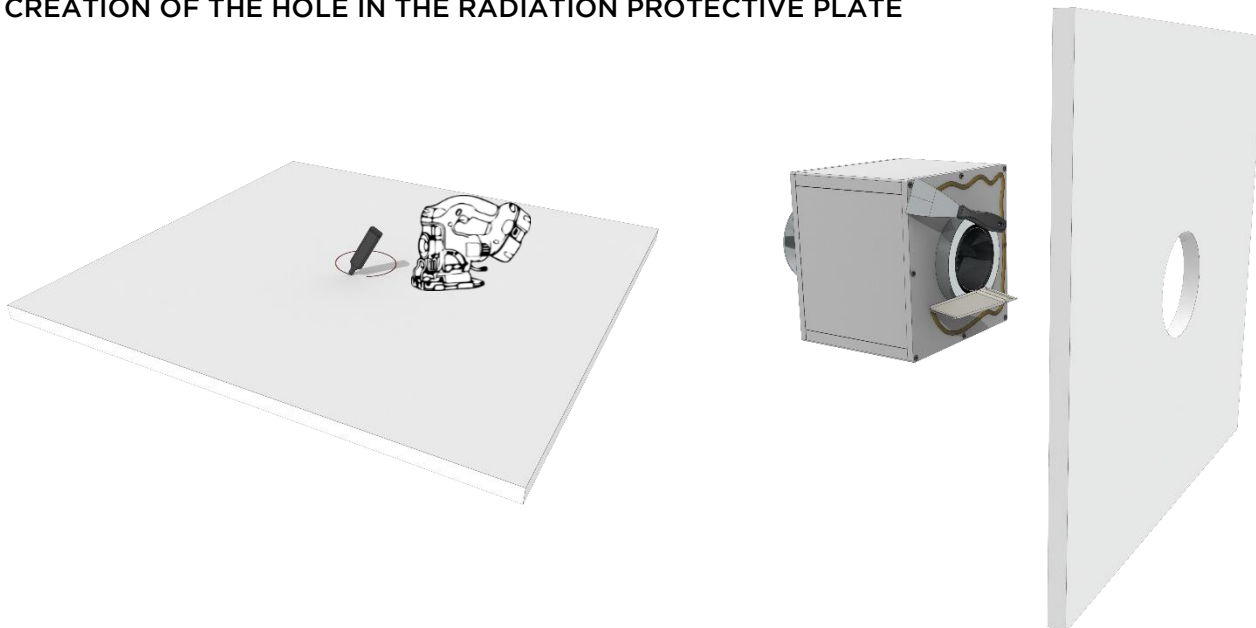
In this case, this wall covering must be replaced with the radiation protection plate.

The radiation protection plate is glued to the wall duct LUX-NOVA with the fire protection adhesive and screwed to do this choose the required cutout section with diameter 1 cm larger than the outer diameter of the exhaust pipe, so you can easily pass through the exhaust pipe.

Following is a schematic representation of the wall duct after installation with radiation protection plate:

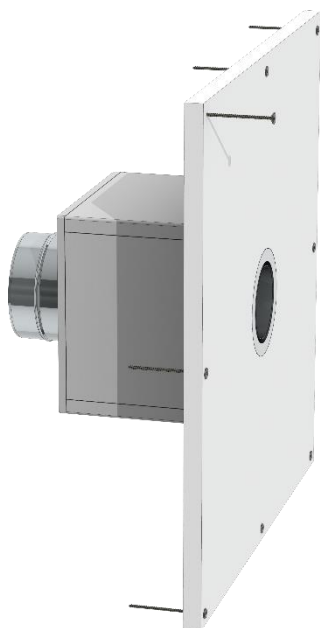


## CREATION OF THE HOLE IN THE RADIATION PROTECTIVE PLATE



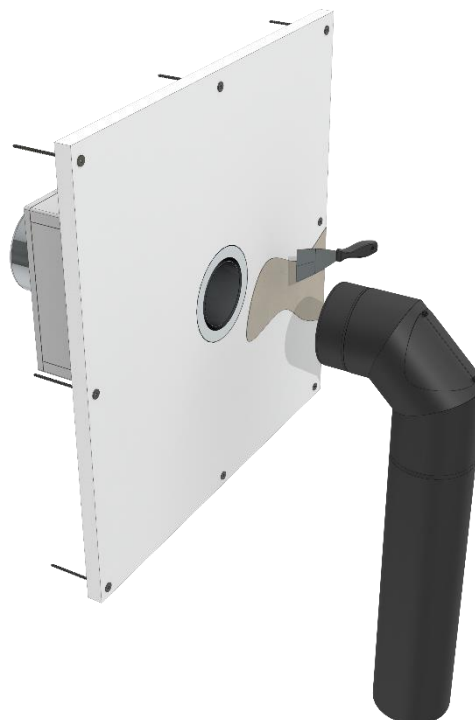
1. Lay the radiation protection plate with the sleeve side on the ground e.g. Use the wall lining as a template for marking the required pipe cutout, the cut is to be placed in the middle of the plate, and then make the neckline with a jigsaw or similar tool.

2. Apply the fire protection adhesive on the wall duct, circumferential and caterpillar -shaped.



3. Fasten the radiation protection plate to the duct with the aid of the fire protection adhesive and fix with drywall screws to the surface to be protected.

Optionally, the radiation protection plate can be bolted to the box body of the duct. In this case, the screw connection must be made centrally in the area of the 40 mm thick outer walls of the wall duct. A previous mark is therefore recommended!

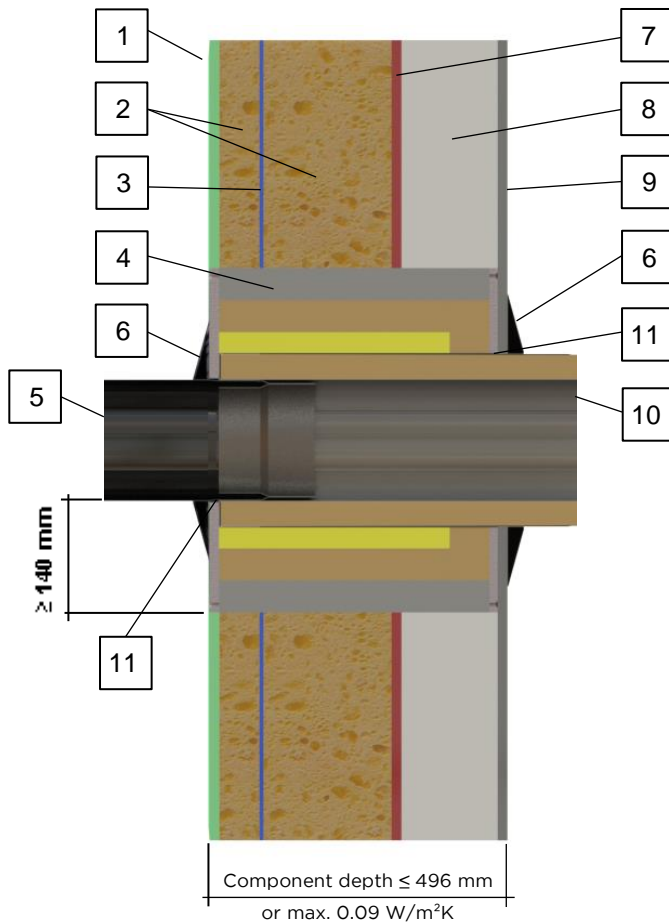


4. If necessary, the plate can be filled and sanded.

For this purpose, the guidelines for dry construction must be observed (e.g. primer, etc.).

## DETAILS WALL DUCT LUX-NOVA IN EXTERIOR WALL FOR PASSIVE HOUSE

Lead through of DW exhaust system with integrated wall lining up to inner wall



Pos. 1 Wallboard

- Gypsum plasterboard / fiber board
- Gypsumbased fire protection board
- Calcium-Silicate plate
- Promatect H / Promatect L
- Promaxon Typ A
- Bluclad
- Incl. vapour barrier film (B2-DIN 4102)

Pos. 2 Wall insulation materials

- Mineral wool, A1-DIN 4102
- Mineral wool, A2-DIN 4102
- Cellulose, cork, wood fiber insulation
- Polystyrene
- and others

Pos. 3 Vapour barrier

- can be glued directly to the wall duct with suitable adhesive tape or glued to a special seal for vapour barrier provided by the manufacturer

Pos. 4 Wall duct

- Composition see attachment 1

Pos. 5 Flue pipe / connection pipe

- uninsulated or insulated

Pos. 6 Wall cover / covering collar

- View cover

Pos. 7 Support plate

- Building biological Fermacell board
- Building biological Gypsum fiberboard
- and others

Pos. 8 Outer wall insulation

- foamed polystyrene / mineral wool / Polyurethane
- and others

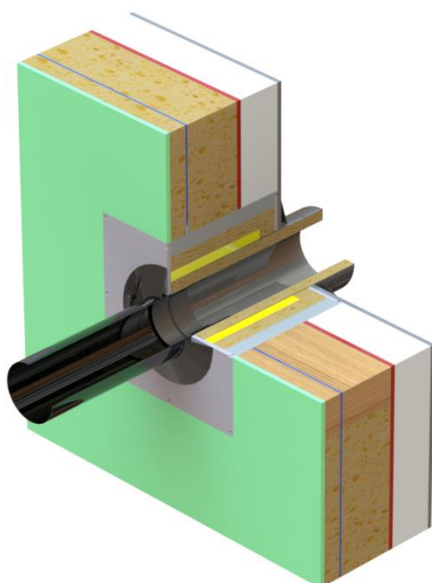
Pos. 9 Exterior plaster

- Reinforcing mesh including adhesive and reinforcing mortar & finishing coat
- Can be applied as weather protection over the plaster base plate of wall duct

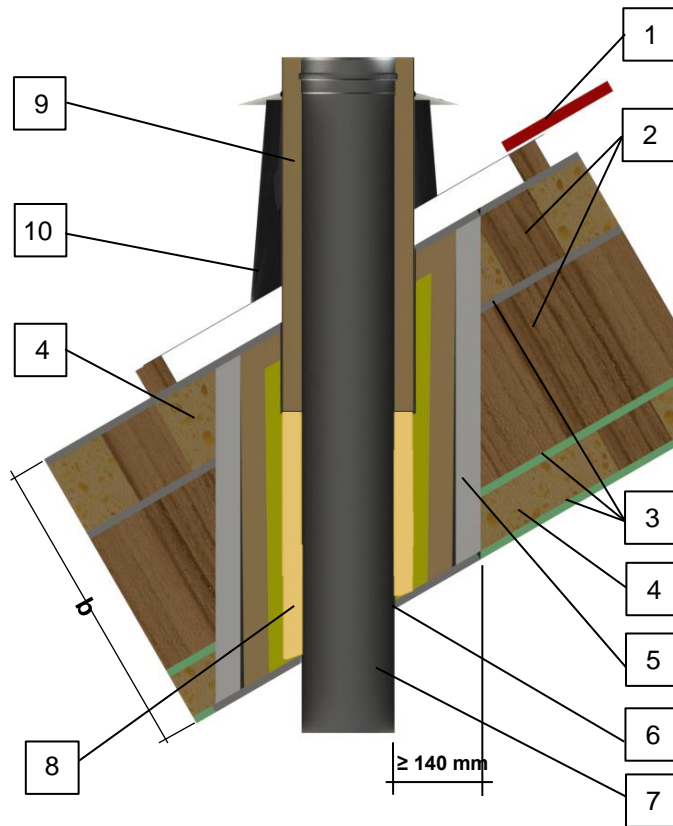
Pos. 10 Double wall chimney system

Pos. 11 Filling material at the inlet & outlet

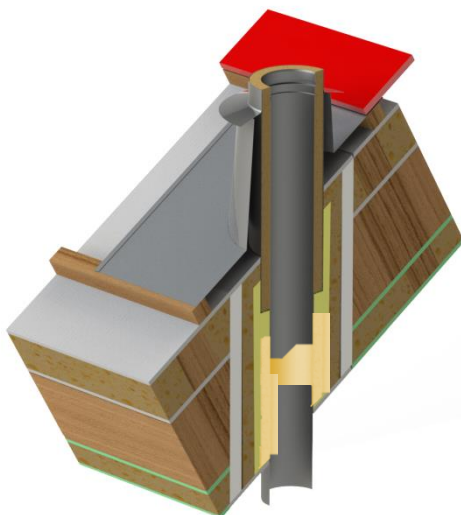
- Mineral wool, A1-DIN 4102
- Darning wool, A1-DIN 4102



Installation example: Pitched roof duct in a roof structure with wooden beam construction



Component depth  $b \leq 496 \text{ mm}$  or max.  $0.09 \text{ W/m}^2\text{K}$



- Pos. 1 Roof covering
  - Brick roofing / roof battens / form-work interrupted in the area of roof duct
- Pos. 2 Wooden beams of roof truss
  - different wood constructions
- Pos. 3 Ceiling boards
  - Gypsum plasterboard
  - Gypsum fiber board
- Pos. 4 Heat insulation in the roof structure
  - different heat insulations
- Pos. 5 Pitched roof duct
  - LUX-NOVA adapt to the roof pitch
- Pos. 6 Filling material at the inlet & outlet
  - Mineral wool, A1-DIN 4102
  - Ceramic insulation, A1-DIN 4102
- Pos. 7 Exhaust system / connecting pipe
- Pos. 8 Insulation min. 25 mm for single wall exhaust system / connecting pipe
- Pos. 9 Double wall chimney system
  - Exhaust system with min. 25 mm heat insulation
- Pos. 10 Stainless steel-roof penetration with storm collar